

Title (en)  
ALTERNATING CURRENT CONVERTER

Title (de)  
WECHSELSTROM-WANDLER

Title (fr)  
CONVERTISSEUR ELEVATEUR DE TENSION

Publication  
**EP 1685643 A1 20060802 (FR)**

Application  
**EP 04766262 A 20040719**

Priority  
• EP 2004051543 W 20040719  
• FR 0311622 A 20031003

Abstract (en)  
[origin: US2007014135A1] Voltage booster converter comprising a pair of input terminals A and B for connecting a DC input voltage  $V_{in}$  between these two terminals; a pair  $P_{<SUB>0</SUB>}$  of switches SB, SH in series connected by the switch SB to the input terminal B, the input terminal A being connected across an input inductor  $L_{in}$  to the connection point between the two switches SB and SH in series, each switch SB, SH comprising a control input so as to be placed simultaneously, one in an on state the other in an isolated state; a pair of output terminals C and D, for powering, by an output voltage  $V_{out}$ , a load  $R_{out}$ , the output terminal D being connected to the input terminal B; K other additional pairs  $P_{<SUB>1</SUB>}$ ,  $P_{<SUB>2</SUB>}$ , ...  $P_{<SUB>i</SUB>}$ , ...  $P_{<SUB>K-1</SUB>}$ ,  $P_{<SUB>K</SUB>}$  of switches in series between the output terminal C and the free side of the switch SH with  $i=1, 2, \dots K-1, K$ , the two switches of one and the same additional pair  $P_i$  being connected across an energy recovery inductor  $L_{<SUB>1</SUB>}$ ; K input groups,  $G_{in<SUB>1</SUB>}$ ,  $G_{in<SUB>2</SUB>}$ , ...  $G_{in<SUB>i</SUB>}$ , ...  $G_{in<SUB>K-1</SUB>}$ ,  $G_{in<SUB>K</SUB>}$ , of  $N_i$  capacitors C of like value each in series, with  $i=1, 2, \dots K-1, K$  and  $N_i=i$ ; K output groups,  $G_{out<SUB>1</SUB>}$ ,  $G_{out<SUB>2</SUB>}$ , ...  $G_{out<SUB>i</SUB>}$ , ...  $G_{out<SUB>K-1</SUB>}$ ,  $G_{out<SUB>K</SUB>}$ , of  $M_i$  capacitors C of like value each in series, with  $i=1, 2, \dots K$  and  $M_i=(K+1)-i$ . The switches of these other K additional pairs are controlled simultaneously by the first and second complementary control signals.

IPC 8 full level  
**H02M 3/158** (2006.01)

CPC (source: EP US)  
**H02M 3/07** (2013.01 - EP); **H02M 3/158** (2013.01 - EP US)

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Designated contracting state (EPC)  
DE FR GB

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